## REMARKS

Claims 1-10 are now pending in the application. Applicant has amended several of the claims. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein. Basis for the claim amendments can be found through the specification, drawings, and claims as originally filed.

## REJECTION UNDER 35 U.S.C. §103

In the office action, claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ciscon et al (US PGPUB 2002/0004827) in further view of Srivastava (US 6, 684,331).

The Applicant respectfully submits that Ciscon and Srivastava do not establish a prima facie case of obviousness as to the pending claim 1. According to claim 1, "multi-layers" refers to layers of managing multicast users, including an interface layer, a data link layer and a user layer. The "multi-layers" in Ciscon, however, refers to layers of network communication, i.e., seven OSI Reference Model Layers. Therefore, the concepts of "multi-layer" between claim 1 and Ciscon are different, which leads to the difference of "multi-layer management" concepts between claim 1 and Ciscon. Specifically, the "multi-layers management" of claim 1 refers to multi-layer management of multicast users, e.g., managing users of the multicast group, while the "multi-layers management" in Ciscon refers to control QoS of network communication among seven OSI layers. Therefore, although both Claim 1 and Ciscon mention the "multi-layers"

concept and the "multi-layer management" concept, the specific meanings of these concepts in claim 1 and Ciscon are different.

Claim 1 recites a multi-layer user management method for multicasting proxy, comprising:

dividing a user management for multicasting groups into three layers: management at an interface layer for controlling multicasting characteristics corresponding to interfaces, management at a data link layer for controlling multicasting characteristics corresponding to data links and management at user layer for controlling multicasting characteristics corresponding to particular users, and at each layer, setting control blocks that are respectively comprised of multicasting characteristic data corresponding to said each layer;

establishing a data relationship among the three layers of control blocks; and

managing a user of the multicasting group using the data relationship among the three layers of control blocks.

Ciscon at best discloses that a global network monitor, network controller and a resource database are set for a multi-layer network communication architecture. The network monitor monitors the OSI reference model layers. The network controller determines that a QoS event is occurred on the Layer N of the OSI reference model, and then, according to the QoS event and the state of the resource database, changes the network provisioning at a layer less than N in response to the QoS event.

As mentioned above, the concepts of "multi-layers" and "multi-layer management" between claim 1 and Ciscon differ. Ciscon fails to teach or suggest the technical features dividing a user management for multicasting groups into three layers, management at an interface layer, management at a data link layer and management at user layer in claim 1.

Since Ciscon discloses that a global network controller is set for all layers, Ciscon fails to teach or suggest the feature at each layer, setting control blocks that are respectively comprised of multicasting characteristic data corresponding to said each layer, as well as the technical feature establishing a data relationship among the three layers of control blocks in claim 1.

Ciscon at best relates to QoS management of network communication among seven OSI layers, Therefore, Ciscon fails to teach or suggest the technical feature managing a user of the multicasting group through the data relationship among the three layers of control blocks

Srivastava at best discloses an approach for establishing secure multicast communication among multiple multicast proxy service nodes of domains of a replicated directory service that spans a wide area network, wherein the domains are logically organized in the form of a binary tree and each domain stores a logical sub-tree that organizes the multicast proxy service nodes. Each domain also comprises a group manager at the root node of the sub-tree, a key distribution center, multicast service agent, and directory service agent. Multicast proxy service nodes each store a group

session key and a private key. A multicast group member joins or leaves the group by publishing a message. The local key distribution center and multicast service agent obtains its own identifier from the Binary tree for a Publisher Specific Group. A secure channel is established with other MSA nodes in the Binary tree for the Published Specific Group. All keys of the binary tree branch that contains the joining or leaving node are updated, an updated group session key and a new private key are received. Srivastava realizes secure key distribution and update.

Srivastava at best relates to key distribution and updates. Claim 1, however, relates to multicast user management. Although Srivastava refers to multicast proxy service nodes, the technical solution of Srivastava is different from that of claim 1. Therefore, Srivastava also does not teach or suggest the above emphasized limitations in claim 1. Consequently, Ciscon and Srivastava fail to teach or suggest all of the limitations of claim 1 and thus do not make claim 1 obvious.

Further and alternatively, claim 1 relates to multicast managing field, and the technical problem to be solved by claim 1 is that only interface-level multicast management can be implemented in the conventional network equipments and the impossibility of controlling the management for data links and users. An interface may comprise multiple data links and a data link may comprise multiple multicast users. Ciscon, however, relates to quality management in wideband system and the technical problem to be solved by Ciscon is to bridge the gaps of application service and QoS between the network layers. Srivastava relates to secure network management system

and the technical problem to be solved by Srivastava is providing a scheme of key distribution and update that can eliminate single point of failure by making group managers accessible over a WAN.

Therefore, the technical field and the technical problem to be solved by claim 1 are different from those of Ciscon and Srivastava. Based on the above-mentioned argument, Ciscon and Srivastava fail to teach or suggest claim 1.

For at least the foregoing reasons, the Applicant respectfully submits that independent claim 1 defines over Ciscon and Srivastava, and should be allowed. For at least the same reasons, dependent claims 2-10 are patentable.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 08-0750, under Order No. 9896-000007/US from which the undersigned is authorized to draw.

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Respectfully submitted,

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